

ABSTRACT OF THE DISCLOSURE

One problem with a sealed type nickel-metal hydride battery is that the high-rate discharge capability is inferior to that of a nickel-cadmium storage battery, because of a slow transfer rate of charges to the surface of a hydrogen storing alloy that is a negative electrode. Another problem is that the use of an alloy having excellent life characteristics takes much time for initial activation of battery characteristics.

10 The invention provides a solution to the aforesaid problems by the provision of a sealed type nickel-metal hydride battery (1) improved in high-rate discharge capability and charge-discharge cycle characteristics. To this end, the invention is characterized by locating a 50
15 nm to 400 nm thick nickel-rich layer (11) on the surface of a hydrogen storing alloy powder, and locating the nickel-rich layer (11) as well on the surface of cracks (12) that open at the surface of alloy, and more preferably setting the mass saturation magnetization of
20 the alloy powder at 2.5 to 9 emu/g and the content of magnetic nickel at 0.5 to 1.9 mmol per gram of the hydrogen storing alloy powder. A succession of hydrogen absorption step, alkali treatment step, product removal step, hydrogen desorption step and partial oxidization
25 step by air are applied to the hydrogen storing alloy powder to obtain alloy powder, which is then used to obtain a battery having the aforesaid features. The invention is effectively applied to corrosion-resistant

hydrogen storing alloys containing Er, Y and Yb.